Overview and Preparation Guide for PSAE Day 2

Illinois State Board of Education
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Initialisms
PSAE — Prairie State Achievement Examination
ISBE — Illinois State Board of Education
Prairie State Achievement Examination

Overview
An Overview for Students

The Illinois State Board of Education (ISBE) provides this booklet to help you prepare for the Prairie State Achievement Examination (PSAE). The first part of this booklet is an overview that answers some basic questions about the PSAE: What is it? What will it cover? When will it be given? The second part of this booklet is a preparation guide for the three tests that you will take on Day 2 of the PSAE.

What is the Prairie State Achievement Examination, or PSAE?
The PSAE is the state assessment given to grade 11 students and used for school accountability. Current state law requires that students take the PSAE to receive a regular high school diploma, unless they are exempt. Therefore, some grade 12 students also participate in the PSAE for this purpose.

What subjects does the PSAE test?
The PSAE tests four academic subjects: reading, mathematics, science, and writing.

When will I take the PSAE?
You will take the PSAE on April 28 and 29, 2010. For students who are not in school on one or both of these test dates, makeup tests are given two weeks later on May 12 and 13, 2010.

If you will be taking the PSAE with accommodations, you will have a two-week testing window during which your high school may administer the Day 1 and Day 2 tests.

What is the purpose of the PSAE?
The PSAE measures your academic achievement with respect to the Illinois Learning Standards and determines whether you will receive recognition for excellent performance. PSAE results also show the progress that schools and the state have made toward meeting the Standards.

What are the Illinois Learning Standards?
The Illinois Learning Standards are statements of the specific knowledge and skills that every public school student should learn in school. Thousands of Illinois citizens—teachers, parents, school administrators, employers, community leaders, and representatives of higher education—identified what they believe you will need to know and be able to do after you graduate from high school.

Whether you intend to go directly to a job or plan to attend a vocational or technical school, junior college, or four-year college, you will have the academic background you will need to compete successfully if you meet the Illinois Learning Standards. The Standards cover reading, mathematics, science, and writing—all of which are tested on the PSAE. There are also Standards for social science, physical development and health, fine arts, and foreign languages.

Where can I find more information about the Illinois Learning Standards?
To read more about the Standards, visit the Web site maintained by the Illinois State Board of Education (ISBE) at www.isbe.net/ils/default.htm.

What tests will I take on each day of PSAE testing?
You will take the ACT® Plus Writing on Day 1. The ACT multiple-choice battery consists of four tests: English, mathematics, reading, and science. The ACT Writing Test is a 30-minute test with a single prompt question.
On Day 2 you will take one test developed by ISBE with assistance from Illinois teachers and two ACT-developed WorkKeys® tests. The ISBE-developed test is in science. The WorkKeys tests are in reading and mathematics.

**Why does the PSAE include different kinds of tests?**

The PSAE is designed to measure progress toward meeting the Illinois Learning Standards and also to provide students with broad achievement information. For these reasons, ISBE includes tests that measure the Illinois Learning Standards and that also provide a measure of workplace skills and readiness for college.

The four ACT multiple-choice tests measure what you have learned in English, mathematics, reading, and science. The ACT Writing Test measures what you have learned with regard to making and expressing judgments, developing and supporting a viewpoint, organizing and presenting ideas logically, and communicating clearly in original, first-draft writing. The two WorkKeys tests add depth and breadth; they address the “Applications of Learning” that are part of the Standards for every academic area, and they increase the range of skills in reading and mathematics that are assessed. Complete coverage of the Standards for science is accomplished by the inclusion of an ISBE-developed test in science.

Your PSAE score for each subject will be based on two of the tests that make up the PSAE. For example, PSAE science consists of ACT science on Day 1 and the ISBE-developed science test on Day 2. The charts on pages 11 and 12 show how the tests that make up the PSAE fit together to assess each subject.

**Why are WorkKeys tests included on the PSAE?**

ISBE decided to incorporate two WorkKeys tests, *Reading for Information* and *Applied Mathematics*, into the PSAE for three reasons:

1. WorkKeys tests assess whether you can apply what you have learned in the classroom to non-classroom situations, as required by the “Applications of Learning” sections of the Illinois Learning Standards.

2. WorkKeys tests give you a set of scores that you can use to identify the workplace skills you already have and those you need to acquire.

3. WorkKeys scores are used by many employers as part of the process of determining whether a job applicant is suited for a particular job or training program. WorkKeys skill levels have been used to describe thousands of jobs ranging from entry-level to those requiring postsecondary degrees. You may include your WorkKeys scores in your portfolio and present them for comparison with the requirements of the job you are seeking. You may also use your scores toward earning a National Career Readiness Certificate.

**How and when will I receive my PSAE scores?**

In the fall, schools will receive the official PSAE score reports for individual students. In addition to your PSAE score report, you will receive an ACT score report and a score report for each of the two WorkKeys tests. ACT will mail your ACT score report to your home address in May or June. The WorkKeys *Reading for Information* and *Applied Mathematics* score reports will be sent to schools about the same time as the PSAE score reports.

**Will the PSAE scores become part of my school transcript?**

Your PSAE score in each subject will be recorded on your transcript, and the subjects in which you earned a Prairie State Achievement Award will be indicated.
What is a Prairie State Achievement Award?
A Prairie State Achievement Award is special recognition given for excellent performance. You will earn an award for every PSAE subject in which your score is at the Exceeds Standards level. (There is no score or award for the PSAE as a whole.) Each award you receive will be noted on your transcript, and you will receive a certificate showing the subjects in which you received an award. Certificates will be sent to your school with the PSAE score reports in the fall.

Will I receive ACT scores that I can use when I apply to colleges?
Yes, as long as you test under standard conditions or with ACT-Approved accommodations (if applicable). You can send the ACT scores that you receive from PSAE testing to colleges of your choice, just as you can send ACT scores from national testing. You may choose to have your scores sent to up to four colleges at no cost to you. You will be given information about how to have your test scores sent to additional colleges when you receive your ACT scores. ACT will mail your score report to your home address in May or June.

Are ACT scores from state PSAE testing accepted by colleges and the Illinois Student Assistance Commission (ISAC)?
Yes. Colleges and universities throughout the United States and ISAC have indicated their willingness to use ACT scores reported from state testing.

Are ACT scores from state PSAE testing accepted by the National Collegiate Athletic Association (NCAA)?
In 2006, the National Collegiate Athletic Association (NCAA) implemented rules changes that allow the use of state ACT scores in determining initial eligibility for participation in Division I and Division II sports. These changes were effective January 9, 2006, for Division II and August 1, 2006, for Division I. As a result, students entering college on or after August 1, 2006, can use state ACT scores for both Division I and Division II initial eligibility. Questions may be directed to the NCAA Eligibility Center at 877/262-1492.

Are the WorkKeys scores from PSAE testing accepted for the National Career Readiness Certificate (NCRC)?
Yes, if the tests are taken under standard conditions or with approved accommodations, WorkKeys scores may be used toward a National Career Readiness Certificate.

Should students with disabilities take the PSAE?
Students with disabilities must take the PSAE unless they have an Individualized Education Program (IEP) that identifies regular state testing as being inappropriate for them, even with accommodations. Decisions about participation and any need for accommodations that students with disabilities may have are made on an individual basis by each student’s IEP team.

Should students with limited English proficiency take the PSAE?
Students with limited English proficiency must take the PSAE. As necessary, they may receive state-allowed accommodations during testing to assist them in understanding the tests. Because these accommodations are not approved by ACT, ACT scores from these administrations cannot be reported to colleges or universities. If translated versions of the test or other unapproved accommodations are used, WorkKeys scores are not eligible for the NCRC.
Spring 2010 Test Administration Schedule

What is the 2010 test administration schedule?

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Wednesday, April 28, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACT English</td>
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<tr>
<td></td>
<td>ACT Mathematics</td>
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<tr>
<td></td>
<td>ACT Reading</td>
</tr>
<tr>
<td></td>
<td>ACT Science</td>
</tr>
<tr>
<td></td>
<td>ACT Writing</td>
</tr>
<tr>
<td></td>
<td>45 minutes (75 questions)</td>
</tr>
<tr>
<td></td>
<td>60 minutes (60 questions)</td>
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<tr>
<td></td>
<td>[required 15-minute break]</td>
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<tr>
<td></td>
<td>35 minutes (40 questions)</td>
</tr>
<tr>
<td></td>
<td>[required 5-minute break]</td>
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<tr>
<td></td>
<td>30 minutes (one prompt question)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 2</th>
<th>Thursday, April 29, 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ISBE-Developed Science</td>
</tr>
<tr>
<td></td>
<td>WorkKeys Applied Mathematics</td>
</tr>
<tr>
<td></td>
<td>WorkKeys Reading for Information</td>
</tr>
<tr>
<td></td>
<td>40 minutes (45 questions)</td>
</tr>
<tr>
<td></td>
<td>45 minutes (33 questions)</td>
</tr>
<tr>
<td></td>
<td>[required 15-minute break]</td>
</tr>
<tr>
<td></td>
<td>45 minutes (33 questions)</td>
</tr>
</tbody>
</table>

**Note**

Standard time makeup testing for students who are not in school on one or both of these test dates (April 28 and 29) will follow this schedule and be administered on May 12 (Day 1) and May 13 (Day 2).

The window for Day 1 accommodations testing is April 28–May 12, 2010, and the window for Day 2 accommodations testing is April 29–May 13, 2010.
## PSAE Test Results

### Component Tests

<table>
<thead>
<tr>
<th>Component Tests</th>
<th>PSAE Test Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT Reading + WorkKeys <em>Reading for Information</em></td>
<td>PSAE Reading</td>
</tr>
<tr>
<td>ACT Mathematics + WorkKeys <em>Applied Mathematics</em></td>
<td>PSAE Mathematics</td>
</tr>
<tr>
<td>ACT Science + ISBE-Developed Science</td>
<td>PSAE Science</td>
</tr>
<tr>
<td>ACT English + ACT Writing</td>
<td>PSAE Writing</td>
</tr>
</tbody>
</table>
**Description of the Prairie State Achievement Examination**

<table>
<thead>
<tr>
<th>PSAE Test Scores</th>
<th>Component Tests</th>
<th>Descriptions of Component Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSAE Reading</strong></td>
<td><strong>ACT Reading</strong></td>
<td>ACT reading includes four 750-word passages. Each passage is followed by 10 multiple-choice questions. Two of the passages are literary texts (one fiction and one nonfiction). The other two passages are informational texts (one social science and one natural science).</td>
</tr>
<tr>
<td></td>
<td><strong>WorkKeys Reading for Information</strong></td>
<td>Reading for Information includes 15 reading selections that range in length from about 50 up to 300 words. Each selection is followed by one, two, or three multiple-choice questions. The selections are arranged in order of increasing difficulty.</td>
</tr>
<tr>
<td><strong>PSAE Mathematics</strong></td>
<td><strong>ACT Mathematics</strong></td>
<td>ACT mathematics questions require the use of reasoning skills to solve practical problems in mathematics in six areas: pre-algebra, elementary algebra, intermediate algebra, coordinate geometry, plane geometry, and trigonometry. Certain types of calculators may be used; see page 5 of Preparing for the ACT for more information.</td>
</tr>
<tr>
<td></td>
<td><strong>WorkKeys Applied Mathematics</strong></td>
<td>Applied Mathematics measures a student’s skill in using mathematical reasoning to solve work-related problems. Test takers set up and solve problems like those that occur in a workplace. A calculator may be used, and a formula sheet is provided. The questions are arranged in five levels of increasing difficulty. ACT recommends the use of a calculator; see pages 40–41 of this booklet for more information.</td>
</tr>
<tr>
<td><strong>PSAE Science</strong></td>
<td><strong>ACT Science</strong></td>
<td>ACT science presents seven sets of scientific information in the form of reading passages and data summaries. Each is followed by a series of multiple-choice questions. The content includes biology, chemistry, physics, and Earth and space sciences.</td>
</tr>
<tr>
<td></td>
<td><strong>ISBE-Developed Science</strong></td>
<td>The ISBE-developed science assessment presents scientific information in the form of short prompts, with each followed by one multiple-choice question. Questions are distributed equally across life sciences, physical sciences, Earth and space sciences, and science, technology, and society.</td>
</tr>
<tr>
<td><strong>PSAE Writing</strong></td>
<td><strong>ACT English</strong></td>
<td>ACT English measures two aspects of standard written English: (1) conventions, including punctuation, grammar and usage, and sentence structure [40 questions] and (2) rhetorical skills, including strategy, organization, and style [35 questions]. The test includes five prose passages, each followed by several multiple-choice questions. Different types of passages are included so that a variety of skills are assessed.</td>
</tr>
<tr>
<td></td>
<td><strong>ACT Writing</strong></td>
<td>The ACT Writing Test consists of one writing prompt that briefly states an issue and describes two points of view on the issue. Students respond to a question about their position on the issue. (Students’ essay scores are not affected by the point of view they take on the issue.)</td>
</tr>
</tbody>
</table>
Prairie State Achievement Examination

Preparation Guide for PSAE Day 2
Preparing for the ISBE-Developed Science Assessment
ISBE-Developed Science Assessment

You will take the ISBE-developed science assessment on Day 2 of the PSAE. It will consist of 45 multiple-choice items. You will have 40 minutes to complete this assessment.

The questions on the science assessment measure critical thinking skills required in the natural sciences, including interpretation, analysis, evaluation, reasoning, and problem solving. The assessment presents scientific information in the form of short prompts, with each followed by one multiple-choice question.

Test questions are distributed across the Illinois Learning Standards that cover science inquiry; the life, physical, and Earth and space sciences; and the relationship among science, technology, and society.

The following pages contain 45 sample questions that were written for the ISBE-developed science assessment. Following the samples, you will find a key on page 32 that gives the correct answer for each question.
1. Use this information to answer the next question.

This chart shows a strand of DNA undergoing replication.

\[
\begin{array}{cccccc}
5' & T & C & A & A & G \\
\vdots & & & & & \vdots \\
A & & & & & \\
3' & & & & & \\
\end{array}
\]

Assuming that no mistakes are made, what will be the code for the complementary (daughter) strand of DNA that is being formed?

A. 3’ AGTTC 5’
B. 3’ AGCCT 5’
C. 3’ AGUUC 5’
D. 3’ ACTTG 5’

2. The leaf-tailed gecko, as its name suggests, has evolved a tail shaped like a leaf. In which habitat would this animal most likely be found?

A. Rain forest
B. Desert
C. Tundra
D. Prairie

3. During cellular respiration, energy from glucose is converted and stored for use by the cell in what form?

A. As heat energy in water molecules
B. As kinetic energy in ADP molecules
C. As potential energy in oxygen molecules
D. As chemical energy in ATP molecules

4. Steven examined 3 different animals. Each animal was classified in a different class. All 3 animals could be members of which category of biological classification?

A. Order
B. Genus
C. Family
D. Phylum
Which set of drawings demonstrates what happens to cells in plant root tips during growth?

A.  
B.  
C.  
D.  

In contrast to DNA, an RNA molecule contains uracil (U) instead of thymine (T). All other bases remain the same. During transcription, an RNA molecule is constructed from a coding strand of DNA using complementary coding. How would the RNA molecule coded from this portion of a DNA molecule TACCGG read?

A. AUGC
B. ATGGG
C. UUGGC
D. UAGGC

A female horse has the genotype $RrTT$.

What allele combinations would most likely be present in her eggs?

A. $Rr, TT$
B. $RT, rT$
C. $RT, rT, Rr, TT$
D. $RT, Rt, rT, rt$
Science

8. Which statement is true about this relationship diagram?

A. C is the ancestor of B, D, E.
B. D is the ancestor of E, H.
C. E is the ancestor of F, G, H.
D. F is the ancestor of G.

9. Some scientists predict that increasing the amount of carbon dioxide in our atmosphere will have adverse effects on the environment. What is one of these adverse effects?

A. Melting of glaciers and polar ice
B. Depletion of the ozone layer
C. Destruction of the rain forests
D. Cooling effect over Earth

10. Which organisms in a community will have the highest concentration of pesticides in their tissues?

A. Producers
B. Primary consumers
C. Secondary consumers
D. Tertiary consumers

11. When a sample of gas in an expandable container is maintained at 0°C and 1 atm of pressure, it has a volume of 2.0 L. Based on Boyle’s law, what will the volume of the gas sample be if the pressure is increased to 3.00 atmospheres while the temperature is kept at 0°C?

A. 0.67 L
B. 1.56 L
C. 2.05 L
D. 3.04 L
Potassium (K) is most likely to have similar chemical properties to which elements?

A. Ca, Fe, Cu  
B. Li, Na, Cs  
C. Na, Ca, Rb  
D. Mg, Be, Sr
What is the name of the process that forms water droplets on the outside of a cold glass of ice water during a warm, humid day?

A. Boiling  
B. Melting  
C. Freezing  
D. Condensing

How many atoms are in exactly 6 g of carbon-12?

A. 1 atom  
B. 12 atoms  
C. $3.01 \times 10^{23}$ atoms  
D. $6.02 \times 10^{23}$ atoms

Methanol is a fuel with the potential to supplement or replace gasoline as an energy source. Which equation represents the reaction that takes place when methanol is burned?

A. $C_2H_5OH + 3O_2 \rightarrow 2CO_2 + 3H_2O$  
B. $2CH_3OH + 3O_2 \rightarrow 2CO_2 + 4H_2O$  
C. $CH_3OH + N_2 + H_2 + O_2 \rightarrow 2HNO_3 + CH_4$  
D. $C_2H_5OH + N_2 + H_2 + O_2 \rightarrow 2HNO_3 + 2CH_4$
A solution turned yellow when either cresol red or bromthymol blue was added. What is the pH of the solution?

A. Less than 3.2  
B. Greater than 6.6  
C. Between 2.0 and 6.6  
D. Greater than 7.4

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Acid color</th>
<th>pH range where color change occurs</th>
<th>Base color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cresol red</td>
<td>Red</td>
<td>1.0 – 2.0</td>
<td>Yellow</td>
</tr>
<tr>
<td>Methyl orange</td>
<td>Red</td>
<td>3.2 – 4.4</td>
<td>Yellow</td>
</tr>
<tr>
<td>Bromthymol blue</td>
<td>Yellow</td>
<td>6.6 – 7.4</td>
<td>Blue</td>
</tr>
<tr>
<td>Phenolphthalein</td>
<td>Colorless</td>
<td>8.0 – 10.0</td>
<td>Pink</td>
</tr>
</tbody>
</table>

Which most likely exhibits well-defined bedding planes?

A. Gabbro  
B. Granite  
C. Obsidian  
D. Shale

Why is the accumulation of thick loess deposits an important factor in making Illinois an excellent area for growing crops?

A. Loess forms an impermeable layer beneath the rich topsoil.  
B. Loess is a key component of the rich topsoil.  
C. Loess is made of heavy clay, which prevents erosion of the rich topsoil.  
D. Loess blows away easily and exposes the rich topsoil.
**Science**

19. Based on the rock types and sequence of the vertical rock column, what environmental change most likely occurred?

A. Sea level was rising.
B. Glaciers covered the area.
C. Floods occurred at regular intervals.
D. Mountain building was occurring.

20. Which terrestrial planet has the densest atmosphere?

A. Mercury
B. Venus
C. Earth
D. Mars

21. Consider a 2-liter glass cylinder with two holes at different heights. The cylinder is filled with water, and water is allowed to flow through the two holes, as shown in the drawing.

Why does the water flowing from hole X travel a greater horizontal distance than the water flowing from hole Y?

A. Water pressure decreases with depth.
B. Water pressure increases with depth.
C. The density of water decreases with depth.
D. The density of water increases with depth.
Which diagram shows what happens when an ocean plate and a crustal plate meet?

A.  

B.  

C.  

D.  

Geologists examined the rock structure along a segment of the coastline of North America. They found several large tracts of land that contained rocks and fossils that were very different from those in adjacent tracts. Which best explains this observation?

A. Alluvial deposition  
B. Plate tectonics  
C. Diverging boundaries  
D. Volcanic eruptions  

Which has the greatest effect on ocean tides?

A. Comets  
B. Moon  
C. Sun  
D. Mars
Rosa designed this slingshot device. She wanted to determine the average distance a ball would travel when shot from a pouch attached to a pair of posts by rubber bands. In each trial, she shot 3 identical balls by pulling the pouch 10 cm behind the posts. She held the trajectory angle, the angle of the path of the ball, constant at 15° above horizontal. This chart shows the average distance the 3 balls traveled in each trial.

<table>
<thead>
<tr>
<th>Trial</th>
<th>Average distance (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.5</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>5.5</td>
</tr>
</tbody>
</table>

For one trial, Rosa increased the height of the platform beneath the slingshot device 50 cm. Which trial likely incorporated this design change?

A. Trial 1  
B. Trial 2  
C. Trial 3  
D. Trial 4

A team of six scientists is conducting a study of the potential health hazards of a new chemical used in making house paints. One team member’s results show the possibility of a slight hazard, although this does not show up in any of the studies performed by the other team members. The team decides to publish all the results and suggest the need for further investigation into the possibility of a health hazard.

Why would they make this decision?

A. The other studies are incorrect because they did not show evidence of a hazard.  
B. The team members all believe the results of the study showing a slight hazard.  
C. The group funding the research wanted to find evidence of a health hazard.  
D. Even if the studies did not all agree, it is important for the scientific community to have the complete results of the research.

Which of these would require the least ethical judgment on the part of the experimenter?

A. Testing for the transmission of the AIDS virus in human beings  
B. Testing for excessive iron in a city water supply  
C. Determining the effects on human life of a newly developed herbicide to be used in an agricultural area  
D. Dissecting a live frog in a high school biology class
Two spheres having unequal masses are isolated in space from all outside gravitational effects. The larger sphere in each figure below has twice the mass of the smaller sphere.

Which figure best illustrates the relative size and correct direction of the gravitational forces acting between the two masses?

A.  
B.  
C.  
D.  

Elements in the same vertical column of the periodic table have similar chemical properties and combining ratios. Which statement accounts for this chemical behavior of these elements?

A. They have equal numbers of protons, neutrons, and electrons.
B. They have equal numbers of electrons in their outer energy levels.
C. They have equal numbers of neutrons in their nuclei.
D. They have equal numbers of protons in their nuclei.

An astronaut carries a favorite coin from the surface of Earth to the surface of the moon. Which statement best describes the inertial and gravitational mass of the coin when it reaches the surface of the moon?

A. Inertial and gravitational mass remain unchanged.
B. Inertial and gravitational mass decrease.
C. Inertial mass remains unchanged and gravitational mass decreases.
D. Inertial mass decreases and gravitational mass remains unchanged.

Which causes the aurora borealis (northern lights)?

A. Solar wind  
B. Solar eclipse  
C. Lunar eclipse  
D. Comet debris
32. As Earth orbits the sun, Earth travels in an elliptical path with the sun at one focus. Which statement about the speed of Earth in its orbit is correct?

A. Earth’s speed is greatest when it is farthest from the sun.
B. Earth’s speed is greatest when it is nearest the sun.
C. Earth’s speed is constant throughout the orbit.
D. Earth’s speed increases with each orbit.

33. Which is a common characteristic of most comets?

A. Comets’ tails point toward the sun.
B. Comets gain mass as they approach the sun.
C. Comets lose mass as they approach the sun.
D. Comets slow down as they approach the sun.

34. Gretchen and Pablo play on the seesaw at recess. The seesaw pivots at the center. Gretchen weighs 333 N and sits on one end of the seesaw. If Pablo weighs 444 N, where should he sit to balance the seesaw?

A. K
B. L
C. M
D. N

35. What is the first thing a student in a laboratory class should do when a chemical spill occurs?

A. Cover the spill with paper towels
B. Clean the spill up and then notify the teacher
C. Let the spill air dry
D. Notify the teacher
Which two gases represent most of Earth’s atmosphere?

A. Water vapor, carbon dioxide
B. Water vapor, nitrogen
C. Oxygen, carbon dioxide
D. Oxygen, nitrogen

New species can form when organisms are geographically isolated from parent colonies. Examples of barriers that can cause geographic isolation are mountain ranges, rivers, and glaciers. Why would barriers such as these cause new species to evolve over time?

A. Isolated populations can only breed among themselves, keeping genetic changes within the population.
B. Isolated populations produce fewer offspring.
C. Isolated populations will breed with other species to form new species.
D. Isolated populations produce mutations more frequently.

What causes the surface of the sun to emit light and heat?

A. Convection currents heat the core and conserve energy.
B. Hydrogen fuses into helium and releases energy.
C. Fuel combuts with oxygen and releases energy.
D. Nuclear explosions go off at the surface.

Which would be the best instrument for detecting earthquake waves?

A. Seismometer
B. Hydrometer
C. Spectrometer
D. Photometer
Which design for building a sealed-tube barometer will work best?

A. vacuum
   ![Vacuum Diagram]

B. nitrogen
   ![Nitrogen Diagram]

C. argon gas
   ![Argon Gas Diagram]

D. water vapor
   ![Water Vapor Diagram]

Why does the Southern Hemisphere have less variation in normal annual temperature than the Northern Hemisphere?

A. The Southern Hemisphere has colder ocean waters.
B. The Southern Hemisphere receives less solar radiation.
C. The Southern Hemisphere has more cloud cover.
D. The Southern Hemisphere has more water area.

What is the best procedure for detecting the odor of an unknown liquid?

A. Heat a small amount of the liquid to the boiling point and smell the vapor.
B. Put a small amount of the liquid on your finger and after a few minutes smell the liquid remaining on your finger.
C. With a cupped hand, pull air over the liquid towards your nose.
D. With the cap on, turn the bottle upside down; then right the bottle, remove the cap, and smell the inside of the cap.
In the nuclear reaction below, what product would be formed?

$$^{238}_{92}U \rightarrow ^{4}_{2}He + ?$$

A. $^{234}_{90}Th$
B. $^{242}_{94}Pu$
C. $^{207}_{82}Pb$
D. $^0_{-1}e$

What is the name of the instrument used to measure wind speed?

A. Anemometer
B. Barometer
C. Calorimeter
D. Hygrometer

The wolf has nearly been eliminated from Illinois ecosystems.

What effect has this had on its prey, the white-tailed deer?

A. It has had very little impact.
B. The deer’s food supply has grown.
C. The deer’s population has increased.
D. The deer’s major predator is now the gray fox.
# Key for ISBE-Developed Science Sample Items

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<tr>
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<th>Correct Answer</th>
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Preparing for the WorkKeys® Assessments
ACT endorses the *Code of Fair Testing Practices in Education* and the *Code of Professional Responsibilities in Educational Measurement*, guides to the conduct of those involved in educational testing. ACT is committed to ensuring that each of its testing programs upholds the guidelines in each *Code*. A copy of each *Code* may be obtained free of charge from ACT Customer Services (68), P.O. Box 1008, Iowa City, IA 52243-1008, 319/337-1429.

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Some Basic Information

What is WorkKeys?

The WorkKeys system from ACT is designed to help you develop better workplace skills. Better skills mean better-paying jobs—in any career field.

The WorkKeys system consists of job analysis (finding out which skills are needed on the job), assessments (the tests you’ll be taking plus several others), reporting (telling you how your skills match job requirements), and instructional support (guidance to educators related to improving students’ skill levels).

Why is WorkKeys important?

In many places throughout the United States, employers find that students are not adequately trained even for entry-level jobs. WorkKeys helps businesses and educators work together to ensure that you leave school prepared for real jobs in the real world.

What types of skills are needed?

WorkKeys measures skills that employers believe are critical to job success—skills such as reading, math, listening, locating information, and teamwork. These skills are valuable for any type of occupation—skilled or professional—and at any level of education.

How does the system work?

WorkKeys helps you figure out how prepared you are for jobs that interest you and guides you to the education and training you need. The system documents your work skills in key areas, giving you an edge with employers when you apply for jobs.

So are these tests designed for only low-level, blue-collar jobs?

Not at all. WorkKeys has analyzed the job skills needed for over 16,000 job titles, ranging from accountant to automotive technician and from welder to webmaster. In fact, the fastest growing types of WorkKeys job profiles are being done for professional, technical, and managerial jobs that require at least a bachelor’s degree. The abilities to learn, listen, communicate, work in teams, and solve problems—all areas addressed by WorkKeys—are important assets for any employee, regardless of career choice.

Do higher skills mean higher salaries?

Studies show that jobs requiring higher skills in math, locating information, and reading pay higher entry-level salaries. By increasing your skills while you are still in school, you increase your opportunities for higher salaries both now and in the future.
Why should I care about these tests?

Since WorkKeys tests aren’t the college entrance exam that many high school students focus on, some students don’t see the purpose in trying to do their best on them. You need to remember, however, that everyone enters the workforce eventually, whether you get a job right out of high school, work part time while continuing your education, or go through extensive postsecondary training. WorkKeys stresses skills development important for every type of employment.

Why do some of the test questions seem irrelevant to my career choice?

Since WorkKeys questions relate to a variety of real-life experiences, the situations sometimes deal with work environments that do not interest particular students. Even very difficult exams, such as the Law School Admission Test or the Graduate Record Examination, routinely contain analytical reasoning questions that feature taxi drivers, executives, carpet sellers, professors, bellhops, architects, and numerous other workers. The basic skills needed to solve a legal question, configure a computer, or schedule employee vacations may be similar for all these tests. And while some WorkKeys test questions can be fairly easy, others are quite difficult—to measure the widest possible range of skills.

Can I study for the tests?

Since WorkKeys measures applied skills, you can’t cram to memorize answers for the tests. However, you can use these practice sets to see and work with typical WorkKeys test questions.

What happens to the test results?

You can use your WorkKeys results to get a better picture of jobs you are ready for and to improve areas where your skills are weak. Employers can use the results to determine your qualifications for positions in their organizations. And schools can use the information, along with input from employers, to ensure that their curriculum provides adequate work skills training to meet business needs.
Test Taking Tips

Although there are several different WorkKeys skill areas, you will be taking the Applied Mathematics and Reading for Information tests as part of the examination. A description of each follows. Both tests contain multiple-choice items followed by five possible answers from which you are to choose the best one. The following suggestions apply to both tests.

Pace yourself.

The time limits set for each WorkKeys test give nearly everyone enough time to finish all the questions. However, it is important to pace yourself. Don’t spend too much time on one problem or reading section; go on to the other questions and come back if there is time.

Listen to and read the directions for each test carefully.

Before you begin taking one of the WorkKeys tests, pay careful attention to the directions. These tests ask for the best answer. It is important to keep this in mind when answering the questions, since it will sometimes be possible to think of responses that would be better than any of those offered or to defend a choice as not entirely wrong. Best-response formats are consistent with the real world, where choosing among less-than-perfect alternatives is routine.

You may want to work out the answer you feel is correct and look for it among the choices given. If your answer is not among the choices provided, reread the question and consider all of the answer choices again to find the best one.

Read each question carefully.

It is important that you understand what each question asks. Some questions will require you to go through several steps to find the best answer, while others can be answered more quickly.

Answer the easy questions first.

The best strategy for taking a test is to answer the easy questions and skip the ones you find difficult. After answering all of the easy questions, go back and try to answer the more difficult ones.

Use logic in more difficult questions.

When you return to the more difficult questions, try to use logic to eliminate incorrect answers to a question. Compare the answer choices to each other and note how they differ. Such differences may provide clues as to what the question requires. Eliminate as many incorrect answers as you can, then make an educated guess from the remaining answers.

Answer every question.

Your score on the WorkKeys tests will be based on the number of questions that you answer correctly; there is no penalty for guessing. Thus, you should answer every question within the time allowed for each test, even if you have to guess. The test administrator will announce when there are five minutes remaining on each test.

Review your work.

If there is time left after you have answered every question on a test, go back and check your work on that test. Check to be sure that you marked only one answer to each question. You may not mark answers to a test after time has been called on that test. You may not go back to any other test.
Be precise in marking your answer document.

Be sure that you fill in the correct ovals or circles on your answer document. Check to be sure that the number for the line of ovals or circles on your answer document is the same as the number for the question you are answering. Position your answer document next to your test booklet so you can mark your answers quickly and completely.

Erase completely.

If you want to change an answer on your answer document, be sure to erase the unintended mark completely.
Applied Mathematics is skill in applying mathematical reasoning and problem-solving techniques to work-related problems. Solving mathematical problems in the workplace can differ from solving problems in the classroom. While the math skills needed are the same, math problems in the workplace are not usually laid out neatly in a textbook format. Instead, the employee may be responsible for locating and identifying the necessary information (e.g., on a cash register, price tag, or catalog) and for knowing what to do with that information. It is, therefore, critical to strengthen your core mathematics skills and to develop your problem-solving strategies. Individuals possessing these Applied Mathematics skills will be able to successfully tackle new situations involving mathematics problems in the workplace. Because an employee would have access to a variety of resources for problem solving, a formula sheet that includes all formulas required for the assessment is provided.

There are five levels in the Applied Mathematics skill scale, ranging from Level 3, the least complex, to Level 7, the most complex. These levels were developed based on two main criteria:

- the types of mathematical operations employees must perform, and
- the form and order in which employees receive the information; that is, the presentation of the information.

The skills at the lowest level involve using whole numbers and some decimals in basic math operations: addition, subtraction, multiplication, and division. As the levels progress, the math operations involve more steps. Higher levels include decimals and fractions, conversion of units, averaging, calculating area and volume, and ratios.

As the complexity of the levels increases, the presentation of the information becomes more of a barrier to problem solving. The wording becomes ambiguous, the presence of unnecessary information is more likely, and pertinent information is less obvious. Regardless of skill level, most of these problems will involve one or more of the following applications:

**Quantity**

Employees often need to determine the number of items sold, produced, or purchased, or to figure totals on a per unit basis.

**Money**

Working with monetary units is a central part of business and relates to virtually every job, if in no other way than to understand a paycheck. Tasks involving monetary units include figuring sales, costs, wages, and expenses.

**Time**

Some tasks involve figuring elapsed time. Other problems frequently involve time as it relates to production, sales, costs, distance, and area. In many of these tasks, employees must be familiar with conversion of time units.

**Measurement**

Calculating distance, area, weight, and volume is crucial to most work situations. Again, employees must be familiar with conversions within and between English and metric measures, as well as the appropriate degree of accuracy needed for different situations.
**Proportions and Percentages**

Proportions can be used in many tasks that require making predictions (e.g., if this is the amount needed for X units, how much is needed for Y units). Percentages are used in the workplace to calculate commissions, discounts, taxes, price increases, changes in sales, and wage changes.

**Averages**

Many records in the workplace are expressed in terms of averages (e.g., those involving sales records, wages, costs, hours worked). These averages become tools in the decision-making processes of the business.

Many math problems found in the workplace combine two or more applications: What quantity can be produced in a specified time? What distance can be traveled in a particular time? What is the average cost in terms of money? A common combination of applications is finding the best deal, which requires employees to perform various calculations and then compare the results in terms of relative cost. Examples of typical problems are found in the WorkKeys Applied Mathematics Practice Set.

**Calculators**

WorkKeys recommends the use of calculators for the Applied Mathematics test. No problem on the test requires the use of a calculator; however, it is generally to your advantage to use one.

- You decide whether to use a calculator on the Applied Mathematics test. If you regularly use one in class or when doing your homework, it makes sense to use one on the test. But if you aren’t comfortable using a calculator, you may decide not to use one on the test. You can always bring one and decide not to use it. Pack it the night before so you won’t forget it in the morning.

- We recommend that you use a calculator that you are used to—as long as it is not one of the kinds that are not permitted. Using a more powerful calculator that you are not familiar with is unlikely to give you an advantage over the kind you normally use.

**Permitted Calculators**

You may use any four-function, scientific, or graphing calculator, unless it has features described in the Prohibited Calculators list. For models on the Calculators Permitted with Modification list, you will be required to modify some of the calculator’s features.

**Prohibited Calculators**

The following types of calculators are prohibited:

- calculators with built-in computer algebra systems

  *Prohibited calculators in this category include:
  - Texas Instruments: All model numbers that begin with TI-89 or TI-92 and the TI-Nspire CAS—Note: The TI-Nspire (non-CAS) is permitted.
  - Hewlett-Packard: HP 48GII and all model numbers that begin with HP 40G, HP 49G, or HP 50G
  - Casio: Algebra fx 2.0, ClassPad 300, and all model numbers that begin with CFX-9970G

- handheld, tablet, or laptop computers, including PDAs

- electronic writing pads or pen-input devices—Note: The Sharp EL 9600 is permitted.

- calculators built into cell phones or any other electronic communication devices

- calculators with a typewriter keypad (letter keys in QWERTY format)—Note: Letter keys not in QWERTY format are permitted.
Calculators Permitted with Modification

The following types of calculators are permitted, but only after they are modified as noted:

- calculators with paper tape—Remove the tape.
- calculators that make noise—Turn off the sound.
- calculators with an infrared data port—Completely cover the infrared data port with heavy opaque material such as duct tape or electrician’s tape (includes Hewlett-Packard HP 38G series, HP 39G series, and HP 48G).
- calculators that have power cords—Remove all power/electrical cords.

On Test Day

Be sure your calculator is working and has reliable batteries. You may bring a backup calculator and extra batteries to the test center. Testing staff will not supply batteries or calculators. You will not be allowed to share calculators during testing.

Testing staff will check your calculator to verify it is permitted, and they will monitor your use of your calculator to ensure that you:

- use it only during the Applied Mathematics Test;
- use your backup calculator only after it has been checked by a member of the testing staff;
- do not share your calculator; and
- do not store test materials in your calculator’s memory.

If your calculator has characters one inch high or larger, or a raised display, testing staff may seat you where no other examinee can see your calculator.
**Applied Mathematics Characteristics**

The chart below describes the five levels of Applied Mathematics. The nature of the problems and the skills required to solve them change at each level.

<table>
<thead>
<tr>
<th>Level</th>
<th>Characteristics of Problems</th>
<th>Skills</th>
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</table>
| 3     | • Information translates easily from verbal setup to a mathematical equation  
       • All information provided is necessary to solve the problems and is presented in logical order  
       • Units of measurement not involved in actual calculations (i.e., function solely as labels), except dollars and cents | • Perform single-step basic operations (addition, subtraction, multiplication, and division) using whole numbers  
       • Change a number from one form to another using whole numbers, fractions, decimals, and percentages  
       • Add and subtract negative numbers as well as positive numbers |
| 4     | • Information may be presented out of order  
       • Problem may include extraneous information  
       • Problem may include simple charts or graphs | • Solve problems that require one or two operations, such as addition, subtraction, or multiplication on several positive or negative numbers  
       • Add commonly known fractions, decimals, or percentages (e.g., ½, .75, 25%), and three fractions that share a common denominator  
       • Calculate averages, simple ratios, proportions, and rates, using whole numbers and decimals  
       • Multiply a mixed number by a whole number or decimal  
       • Put the information in the right order before they perform calculations |
| 5     | • Problems include considerable amount of extraneous information  
       • Several steps of logic involved in calculations  
       • Mixed unit quantities may need conversion to a single and/or different set of units (e.g., 4 hours and 30 minutes = 4.5 hours) | • Perform single-step conversions within and between English and non-English systems of measurement  
       • Calculate using mixed units  
       • Divide negative numbers  
       • Calculate perimeters and areas of basic shapes  
       • Calculate percentage discounts and markups  
       • Compute the “best deal” using one- and two-step calculations and then comparing costs |
| 6     | • May require considerable translation from verbal form to mathematical expression  
       • May require considerable setup and involve multiple-step calculations or conversions  
       • May involve transposition of formulas before calculating (e.g., \( v = \pi r \Rightarrow r = \frac{v}{\pi} \))  
       • May involve conversions using two formulas within a system of measurement | • Calculate using negative numbers, fractions, ratios, percentages, and mixed numbers  
       • Calculate multiple rates and then compare the rates or use them to perform other calculations  
       • Find basic areas and volumes of rectangular solids  
       • Calculate the “best deal” using the result in another problem  
       • Identify and correct errors in calculations  
       • Rearrange a formula before solving a problem  
       • Look up and use two formulas to convert units within the same system of measurement or between systems of measurement |
| 7     | • Content or format may be unusual  
       • Information needed to solve the problem may be implicit and need to be derived from the setup  
       • Involve several steps of reasoning and multiple calculations  
       • May include nonlinear functions (e.g., rates of change), and applications of basic statistical concepts (e.g., error of measurement) | • Solve problems involving more than one unknown  
       • Calculate the percent of change  
       • Calculate multiple areas of volumes of spheres, cylinders, and cones  
       • Setup and manipulate complex ratios and proportions  
       • Find the best economic value of several alternatives  
       • Find mistakes in Level 6 problems  
       • Convert between systems of measurement that involve fractions, mixed numbers, decimals, and/or percentages. |
WorkKeys Applied Mathematics Practice Set

This practice set can help you understand the WorkKeys Applied Mathematics skill levels and give you practice for the actual WorkKeys assessment. However, remember that this practice set is not a full-length test and your score is not a substitute for the actual WorkKeys test score. The actual test consists of 33 problems and has a time limit of 45 minutes.

The WorkKeys Applied Mathematics assessment measures skill in applying mathematical reasoning to work-related problems. The test involves setting up and solving the types of problems and doing the types of calculations that actually occur in the workplace. It is designed to be taken with a calculator and a formula sheet, as both would be available on the job. There are five skill levels, ranging from Level 3 to Level 7. As you move from Level 3 to Level 7, the mathematical concepts and calculations become more complex.
**APPLIED MATHEMATICS FORMULA SHEET**

**Distance**
1 foot = 12 inches  
1 yard = 3 feet  
1 mile = 5,280 feet  
1 mile ≈ 1.61 kilometers  
1 inch = 2.54 centimeters  
1 foot = 0.3048 meters  
1 meter = 1,000 millimeters  
1 meter = 100 centimeters  
1 kilometer = 1,000 meters  
1 kilometer ≈ 0.62 miles

**Area**
1 square foot = 144 square inches  
1 square yard = 9 square feet  
1 acre = 43,560 square feet

**Volume**
1 cup = 8 fluid ounces  
1 quart = 4 cups  
1 gallon = 4 quarts  
1 gallon = 231 cubic inches  
1 liter = 0.264 gallons  
1 cubic foot = 1,728 cubic inches  
1 cubic yard = 27 cubic feet  
1 board foot = 1 inch by 12 inches by 12 inches

**Weight/Mass**
1 ounce ≈ 28.350 grams  
1 pound = 16 ounces  
1 pound ≈ 453.592 grams  
1 milligram = 0.001 grams  
1 kilogram = 1,000 grams  
1 kilogram ≈ 2.2 pounds  
1 ton = 2,000 pounds

**Rectangle**
perimeter = 2(length + width)  
area = length × width

**Rectangular Solid (Box)**
volume = length × width × height

**Cube**
volume = (length of side)^3

**Triangle**
sum of angles = 180°  
area = \(\frac{1}{2} (base × height)\)

**Circle**
number of degrees in a circle = 360°  
circumference ≈ 3.14 × diameter  
area ≈ 3.14 × (radius)^2

**Cylinder**
volume ≈ 3.14 × (radius)^2 × height

**Cone**
volume = \(\frac{3.14 × (radius)^2 × height}{3}\)

**Sphere (Ball)**
volume ≈ \(\frac{4}{3} × 3.14 × (radius)^3\)

**Electricity**
1 kilowatt-hour = 1,000 watt-hours  
amps = watts ÷ volts

**Temperature**
\(°C = 0.56 (°F - 32)\) or \(\frac{5}{9} (°F - 32)\)  
\(°F = 1.8 (°C) + 32\) or \(\frac{9}{5} (°C) + 32\)

**NOTE:** Problems on the WorkKeys Applied Mathematics assessment should be worked using the formulas and conversions on this formula sheet.
Applied Mathematics Level 3

Individuals with Level 3 skills can set up and solve problems with a single type of mathematical operation (addition, subtraction, multiplication, or division) on whole numbers, fractions, decimals, or percentages.

1. As a television meteorologist, you will be reporting a high temperature of 29°F and a low temperature of –12°F for the day. What should you tell your audience was the difference between the high and low temperatures?
   A. –17°F
   B. 12°F
   C. 17°F
   D. 29°F
   E. 41°F

2. Your company safety officer has asked you to track the percent of your time at work that you spend standing. You estimate that you stood \( \frac{1}{5} \) of the time today. What percent should you record?
   A. 2%
   B. 5%
   C. 15%
   D. 20%
   E. 50%

3. You need to set up some shirt displays in the clothing store where you work. You have 15 shirts that you want to distribute evenly among 3 displays. How many shirts should you put in each display?
   A. 3
   B. 5
   C. 12
   D. 15
   E. 18
Individuals with Level 4 skills can set up and solve problems with one or two different mathematical operations (addition, subtraction, multiplication, or division) on whole numbers, fractions, decimals, or percentages.

1. PVC pipe sections are connected with an adapter, as shown. You need to connect 2 PVC pipes that have inside diameters of 3.25 inches and 0.4-inch thick walls. What inside diameter, in inches, must the adapter have to fit tightly over the pipes?

A. 1.30  
B. 2.45  
C. 2.85  
D. 3.65  
E. 4.05

2. One of your employees was out of the office today from 2:25 P.M. to 4:10 P.M. for personal reasons. How many hours should be recorded as personal time?

A. 1.45  
B. 1.75  
C. 2.15  
D. 2.25  
E. 2.45
3. In the toy factory where you work, you inspect each toy for defects as it comes off the assembly line and report the defect ratio at the end of each day. On Monday, you inspected 938 toys and recorded 67 of them as defective. What is the ratio of defective toys to the total number of toys that you inspected?

A. 1:67  
B. 1:14  
C. 1:13  
D. 13:1  
E. 14:1
Applied Mathematics Level 5

Individuals with Level 5 skills can set up and solve problems with several steps of logic and calculation involving a mixture of whole numbers, fractions, decimals, or percentages.

1. At the factory where you work, you spend about 3 out of every 21 workdays performing quality checks as needed. Approximately what percent of your time do you spend on quality checks?
   A. 0.07%
   B. 0.14%
   C. 1.4%
   D. 7.0%
   E. 14%

2. You are a custom dressmaker and you are making 4 bridesmaids’ dresses. For each dress, you need to cut 2 skirt panels. Each panel measures 36 inches by 48 inches. The fabric is 44 inches wide. How many yards of fabric will you need for the skirts?
   A. 4
   B. 5 1/2
   C. 8
   D. 10
   E. 11

3. As an electrician, you must determine how much current will flow through a circuit with a voltage of 120 volts across 16 fluorescent bulbs that are rated at 26 watts each. About how much current, in amps, will flow through the bulbs?
   A. 0.2
   B. 0.3
   C. 3.5
   D. 4.6
   E. 7.5
Applied Mathematics Level 6

Individuals with Level 6 skills can set up and solve problems containing unnecessary information and requiring multiple steps. Calculations involve a mixture of whole numbers, fractions, decimals, or percentages.

1. One of your jobs at a nursery is to water plants. A bed of plants is 8 feet wide, 60 feet long, and 4 inches deep. The irrigation system delivers 6 gallons of water per minute, so how many minutes should you let the water run to provide 1 inch of water across the bed?

   A. 7  
   B. 50  
   C. 80  
   D. 200  
   E. 300

2. You work in a circuit-board lab. You need to make up an 85-gallon bath that should be 1 percent sulfuric acid. How many liters of sulfuric acid will you need for the bath?

   A. 0.2  
   B. 0.9  
   C. 2.2  
   D. 3.2  
   E. 8.5

3. On a construction project you estimate a total of 250 hours of labor. Ten percent of this time is for your work. The cost of your labor is $31.00 per hour. The rest of the labor time is divided equally between your 4 assistants. The two assistants at level A earn $19.00 per hour and the two at level B earn $15.00 per hour. What is the total estimate for labor cost?

   A. $1,943.75  
   B. $3,050.00  
   C. $4,600.00  
   D. $5,025.00  
   E. $5,450.00
Applied Mathematics Level 7

Individuals with Level 7 skills can set up and solve complex problems requiring extensive calculations. They can calculate rate of change, set up and manipulate complex ratios and proportions, find multiple areas or volumes of two- and three-dimensional shapes, find the best economic value of several alternatives, and locate errors in multiple-step calculations.

1. Last month, Sharon’s Deli charged the Business Club $231 for 18 chicken lunches and 14 ham lunches. This month, the charge was $225.00 for 15 chicken lunches and 16 ham lunches. The bill does not list the price of a single chicken or ham lunch, but you need to know this so you can bill the members individually. How much did a single chicken lunch cost?
   
   A. $6.00  
   B. $6.50  
   C. $7.00  
   D. $7.25  
   E. $7.50

2. At the furniture store you manage, your cost for a leather sofa is $762. You are selling it for $1,905. What is the percent markup on the sofa?

   A. 15%  
   B. 40%  
   C. 60%  
   D. 150%  
   E. 250%

3. You work in an auto supply store, and you need to order a particular automobile part. One supplier sells the part for $112 per 4 parts. Another supplier sells the same part for $285 per 12 parts. Between these 2 suppliers, how much money would you save on an order of 36 parts using the less expensive supplier?

   A. $4.25  
   B. $51.00  
   C. $153.00  
   D. $221.00  
   E. $855.00
An Important Consideration about the Answers to the Practice Sets

Some WorkKeys questions have a response choice (the “key”) that can be clearly defined as right or correct and other response choices (the “distractors” or “foils”) that can be identified as wrong or incorrect. Many WorkKeys questions, however, are in a best-response format: the keyed response is simply the best of those available. It is important to keep this in mind when discussing such questions, since it will sometimes be possible to think of responses that would be better than any of those offered, or to defend a distractor as not entirely wrong. Best-response formats are consistent with the real world, where choices among less-than-perfect alternatives are routinely the case.

Note: The solutions shown indicate one or two ways to solve each problem. There may be other, equally valid methods of solving the problems.

Answers to Applied Mathematics Level 3 Practice Set

**Answer to Level 3 Sample Item 1:**

A. Incorrect: $29 + (-12) = 17 \rightarrow -17$ (added instead of subtracting, then changed to a negative number)
B. Incorrect: $-12 \rightarrow 12$ (the low temperature shown in the problem, but with the negative sign removed)
C. Incorrect: $29 + (-12) = 17$ (added instead of subtracting)
D. Incorrect: 29 is the high temperature shown in the problem
E. Correct: $29^\circ F - (-12^\circ F) = 29^\circ F + 12^\circ F = 41^\circ F$. Subtract the negative number from the positive number. Since 2 minus signs change to a plus sign, add the absolute values of the 2 numbers together.

**Answer to Level 3 Sample Item 2:**

A. Incorrect: $(1 \div 5) \times 10 = 2$ (multiplied by 10 instead of 100)
B. Incorrect: $5 \div 1 = 5$ (divided 5 by 1 instead of 1 by 5 and did not multiply by 100)
C. Incorrect: 15 (wrote 15 because the fraction has the numbers 1 and 5)
D. Correct: $(1 \div 5) \times 100 = 0.2 \times 100 = 20\%$. Convert the fraction to a decimal by dividing the numerator by the denominator, then multiply by 100 to convert to a percent.
E. Incorrect: $(5 \div 1) \times 10 = 50$ (divided 5 by 1 instead of 1 by 5 and multiplied by 10 instead of 100)

**Answer to Level 3 Sample Item 3:**

A. Incorrect: $15 \div 5 = 3$ (took the number from the problem or made a division mistake by dividing 15 by the correct answer)
B. Correct: 15 shirts $\div$ 3 displays = 5 shirts/display. Divide the number of shirts by the number of displays.
C. Incorrect: $15 - 3 = 12$ (subtracted instead of dividing)
D. Incorrect: 15 (took the number from the problem)
E. Incorrect: $15 + 3 = 18$ (added instead of dividing)
Answers to Applied Mathematics Level 4 Practice Set

Answer to Level 4 Sample Item 1:

A. Incorrect: $3.25 \times 0.4 = 1.30$ (multiplied the inside diameter by the wall thickness)
B. Incorrect: $3.25 - (2 \times 0.4) = 2.45$ (subtracted two times the wall thickness)
C. Incorrect: $3.25 - 0.4 = 2.85$ (subtracted one wall thickness)
D. Incorrect: $3.25 + 0.4 = 3.65$ (added only one wall thickness)
E. Correct: $3.25$ inches $+ (2 \times 0.4$ inches $) = 4.05$ inches. Add the inside diameter and the 2 wall thicknesses to get the necessary inside diameter of the adapter.

Answer to Level 4 Sample Item 2:

A. Incorrect: $4:10 - 2:25 = (3 - 2) + (70 - 25) = 1:45 \rightarrow 1.45$ (did not convert minutes to the decimal equivalent)
B. Correct: $4:10 - 2:25 = (3 - 2) $ hours $ + (70 - 25)$ minutes $= 1$ hour $+ (45$ minutes $\div 60$ minutes/hour $) = (1 + 0.75)$ hours $= 1.75$ hours. Subtract the earlier time from the later time, borrowing correctly.
C. Incorrect: $4:10 - 2:25 \rightarrow 4 - 2$ and $25 - 10 = 2:15 \rightarrow 2.15$ (subtracted the bigger number from the smaller number in hours and minutes and did not convert the minutes to the decimal equivalent)
D. Incorrect: $4:10 - 2:25 \rightarrow 4 - 2$ and $25 - 10 = 2:15 = 2.25$ (subtracted the bigger number from the smaller number in hours and minutes, but correctly converted the minutes to the decimal equivalent)
E. Incorrect: $4:10 - 2:25 \rightarrow 4 - 2$ and $0:10 - 0:25 \rightarrow 2:45 \rightarrow 2.45$ (did not borrow from the hours column when subtracting and did not convert the minutes to the decimal equivalent)

Answer to Level 4 Sample Item 3:

A. Incorrect: $1:67$ (set up the proportion of 1 day to the total number of defective toys)
B. Correct: $67$ toys $\div 938$ toys $= 1 \div 14 \rightarrow 1:14$. Reduce the ratio of defective toys to the total number inspected to lowest terms.
C. Incorrect: $67 \div (938 - 67) = 1 \div 13 \rightarrow 1:13$ (calculated the ratio of defective to non-defective toys)
D. Incorrect: $(938 - 67) \div 67 = 13 \rightarrow 13:1$ (reversed the ratio and found the number of non-defective toys in proportion to the number of defective toys)
E. Incorrect: $938 \div 67 = 14 \rightarrow 14:1$ (reversed the ratio and found the total number of toys inspected in proportion to defective toys)
Answers to Applied Mathematics Level 5 Practice Set

Answer to Level 5 Sample Item 1:

A. Incorrect: \( \frac{21}{3} \div 100 = 0.07 \) (reversed the numerator and denominator and divided by 100 instead of multiplying)
B. Incorrect: \( 3 \div 21 = 0.14 \) (divided 3 days by 21 days but did not convert the decimal to a percent)
C. Incorrect: \( \frac{3}{21} \times 100 \rightarrow 1.4 \) (correctly set up the equation but incorrectly placed the decimal point)
D. Incorrect: \( 21 \div 3 = 7 \) (the numerator and denominator were reversed and the result was mistaken for a percent)
E. Correct: \( \frac{3 \text{ days}}{21 \text{ days total}} \times 100 = 14.3\%, \text{ rounded to } 14\% \). Divide the days performing quality checks by the total workdays and multiply by 100 to obtain the percent.

Answer to Level 5 Sample Item 2:

A. Incorrect: \( 4 \times 36 \div 36 = 4 \text{ yards} \) (forgot to multiply by 2 panels per dress and multiplied by the width instead of the length of the panel)
B. Incorrect: \( 4 \times 48 \div 36 = 5\frac{1}{3} \) rounded to \( 5\frac{1}{3} \) yards (forgot to multiply by 2 panels per dress)
C. Incorrect: \( 4 \times 2 \times 36 \div 36 = 8 \) (multiplied by the width instead of the length of the panel)
D. Incorrect: \( 4 \times 2 \times 44 \div 36 = 9\frac{2}{3} \) rounded to 10 yards (multiplied by the width of the fabric instead of the length of the panel)
E. Correct: \( 4 \text{ dresses} \times 2 \text{ panels/dress} \times 48 \text{ inches/panel} \div 36 \text{ inches/yard} = 10\frac{2}{3} \) rounded to 11 yards. Since the fabric is only 44 inches wide, multiply the 48-inch measurement by the number of dresses and the number of panels per dress, then convert from inches to yards.

Answer to Level 5 Sample Item 3:

A. Incorrect: \( 26 \div 120 = 0.22 \), rounded to 0.2 (found the current for only one bulb)
B. Incorrect: \( 120 \div (26 \times 16) = 120 \div 416 = 0.29 \), rounded to 0.3 (divided the volts by the total watts instead of the total watts by the volts)
C. Correct: \( \frac{26 \text{ watts/bulb} \times 16 \text{ bulbs}}{120 \text{ volts}} = 416 \text{ watts} \div 120 \text{ volts} = 3.47 \), rounded to 3.5 amps. Multiply the bulb's wattage by the number of bulbs and divide by the voltage.
D. Incorrect: \( 120 \div 26 = 4.62 \), rounded to 4.6 (divided the volts by the watts in one bulb instead of the total watts by the volts)
E. Incorrect: \( 120 \div 16 = 7.5 \) (divided the volts by the number of bulbs instead of dividing the total watts by the volts)
Answers to Applied Mathematics Level 6 Practice Set

Answer to Level 6 Sample Item 1:

A. Incorrect: \((8 \times 12) \times (60 \times 12) \times 1) \div 1,728 = 40; 40 \div 6 = 6.67\), rounded up to 7 (converted to cubic feet instead of gallons)

B. Correct: \((8 \text{ feet} \times 12 \text{ inches/foot}) \times (60 \text{ feet} \times 12 \text{ inches/foot}) \times 1 \text{ inch} = 69,120 \text{ cubic inches}; 69,120 \text{ cubic inches} \div 231 \text{ cubic inches/gallon} = 299 \text{ gallons}; 299 \text{ gallons} \div 6 \text{ gallons/minute} = 49.8, \text{ rounded up to 50 minutes}. \text{ Find the volume of water needed in cubic inches. Convert to gallons and divide by the number of gallons delivered per minute.}

C. Incorrect: \((8 \times 60 \times 1) \div 6 = 80\) (did not convert to common unit of inches)

D. Incorrect: \(((8 \times 12) \times (60 \times 12) \times 4) \div 231 = 1,197; 1,197 \div 6 = 199.5, \text{ rounded up to 200} \) (used the bed depth instead of the water depth)

E. Incorrect: \(((8 \times 12) \times (60 \times 12) \times 1) \div 231 = 299.2, \text{ rounded up to 300} \) (did not divide by the number of gallons delivered per minute)

Answer to Level 6 Sample Item 2:

A. Incorrect: \(85 \times 0.01 \times 0.264 = 0.224\), rounded to 0.2 (reversed conversion factor for gallons to liters)

B. Incorrect: \(85 \times 0.01 = 0.85\), rounded to 0.9 (did not convert from gallons to liters)

C. Incorrect: \(85 \times 0.1 \times 0.264 = 2.244\), rounded to 2.2 (multiplied the number of gallons in the bath by 10\% instead of 1\%, and reversed the conversion factor for gallons to liters)

D. Correct: \(1\% \text{ acid/bath} = 0.01 \text{ gallons acid/gallon bath}; 85 \text{ gallons bath} \times 0.01 \text{ gallons acid/gallon bath} \div 0.264 \text{ gallons/liter} = 3.2 \text{ liters acid}. \text{ Multiply the number of gallons in the bath by the percent of sulfuric acid needed in the bath to find the number of gallons of acid needed, then convert from gallons to liters.}

E. Incorrect: \(85 \times 0.1 = 8.5\) (multiplied the number of gallons in the bath by 10\% instead of 1\%, and did not convert from gallons to liters)

Answer to Level 6 Sample Item 3:

A. Incorrect: \(250 + (250 \times .10) = 275; 275 \div 4 = 68.75; (68.75 \div 2 \times 19) + (68.75 \div 2 \times 15) = $1,168.75; 25 \times 31 = $775; $1,168.75 + $775 = $1,943.75. \text{ (added 10\% of the total hours given to the total hours given, divided total by 4, then divided each fourth in half and multiplied by pay rate to calculate workers' pay, then added your pay)}

B. Incorrect: \(250 – (250 \times .10) = 225; 225 + 4 = 56.25; (56.25 \times 2 \times 19) + (56.25 \times 2 \times 15) = $3,825; 25 \times 31 = $775; $3,825 – $775 = $3,050.00. \text{ (subtracted your pay from the total of the other workers)}

C. Correct: \(250 \text{ hours} \times .10\% = 25 \text{ hours}; 250 \text{ hours} – 25 \text{ hours} = 225 \text{ hours}; 225 \text{ hours} \div 4 \text{ workers} = 56.25 \text{ hours/worker}; (56.25 \text{ hours/worker} \times 2 \text{ workers} \times $19/\text{hour}) + (56.25 \text{ hours/worker} \times 2 \text{ workers} \times $15/\text{hour}) = $3,825; 25 \text{ hours} \times $31/\text{hour} = $775; $3,825 + $775 = $4,600.00.\)

D. Incorrect: \(250 + 4 = 62.50; (62.50 \times 2 \times 19) + (62.50 \times 2 \times 15) = $4,250; 25 \times 31 = $775; $4,250 + $775 = $5,025.00. \text{ (divided total hours by 4, calculated pay, then calculated your pay for 10\% more hours)}

E. Incorrect: \(250 + (250 \times .10) = 275; 275 + 4 = 68.75; (68.75 \times 2 \times 19) + (68.75 \times 2 \times 15) = $4,675; 25 \times 31 = $775; $4,675 + $775 = $5,450.00. \text{ (added 10\% of the total hours given to the total hours given, divided total hours by 4, calculated pay for other workers, then calculated your pay and added that to the total of the other workers)}\)
Answers to Applied Mathematics Level 7 Practice Set

Answer to Level 7 Sample Item 1:

A. Incorrect: 231 – 225 = 6 = 6.00 (found the difference between the bills, not the cost of a chicken lunch)

B. Incorrect: (231 ÷ 2) ÷ 18 = 115.50 ÷ 18 = 6.42, rounded to 6.50 (divided the number of chicken lunches into half of the total charged last month)

C. Correct: x = chicken lunch; y = ham lunch; 18x + 14y = $231; 15x + 16y = $225; x = ($225 – 16y) ÷ 15 = $15 – \frac{16}{15} y; 18($15 – \frac{16}{15} y) + 14y = $231; $270 – 19.2y + 14y = $231; $39 = 5.2y; y = $7.50; x = $15 – \frac{16}{15} ($7.50) = $15 – $8 = $7 = $7.00. Set up the system of two equations in two unknowns. Solve one equation for x (chicken lunch) in terms of y (ham lunch) and plug into the other equation. Solve for y and use this value to solve for x.

D. Incorrect: 231 ÷ (18 + 14) = 231 ÷ 32 = 7.22, rounded to 7.25 (found the average cost of a lunch last month instead of the cost of a chicken lunch)

E. Incorrect: 18x + 14y = 231; 15x + 16y = 225; x = (225 – 16y) ÷ 15 = 15 – \frac{16}{15} y; 18(15 – \frac{16}{15} y) + 14y = 231; 270 – 19.2y + 14y = 231; 39 = 5.2y; y = 7.5 (solved for the ham lunch, not the chicken lunch)

Answer to Level 7 Sample Item 2:

A. Incorrect: (1,905 – 762) ÷ 762 = 1.5 → 15 (correctly calculated percent markup but misplaced the decimal)

B. Incorrect: (1,905 – 762) ÷ 1,905 = 0.6 × 100 = 60; 100 – 60 = 40 (divided the markup by the wrong price and subtracted the resulting percent from 100%)

C. Incorrect: (1,905 – 762) ÷ 1,905 = 0.6 × 100 = 60 (divided the markup by the wrong price)

D. Correct: ($1,905 – $762) ÷ $762 = 1.5 × 100 = 150%. Divide the difference between the selling price and the cost by the cost and convert to a percent by multiplying by 100.

E. Incorrect: 1,905 ÷ 762 = 2.5 × 100 = 250 (divided the selling price by the cost and converted to a percent)

Answer to Level 7 Sample Item 3:

A. Incorrect: 112 ÷ 4 = 28; 285 ÷ 12 = 23.75; 28 – 23.75 = 4.25 (calculated the savings on 1 part, not 36 parts)

B. Incorrect: 112 ÷ 4 = 28; 285 ÷ 12 = 23.75; 28 – 23.75 = 4.25; 4.25 × 12 = 51 (calculated the savings on 12 parts, not 36 parts)

C. Correct: $112 ÷ 4 parts = $28/part; $285 ÷ 12 parts = $23.75/part; $28 – $23.75 = $4.25; $4.25 × 36 parts = $153.00. Calculate the cost per part from both suppliers and find the difference, then multiply by the number of parts needed to find the amount saved.

D. Incorrect: 112 ÷ 4 = 28; 285 ÷ 12 = 23.75; 28 – 23.75 = 4.25; 4.25 × (4 + 12 + 36) = 221 (added all 3 numbers of parts mentioned and calculated the savings on that total)

E. Incorrect: 285 ÷ 12 = 23.75; 23.75 × 36 = 855 (calculated the cost of 36 parts at the lower rate)
WorkKeys Reading for Information Assessment

Reading for Information is skill in reading and understanding work-related instructions and policies. Such material, known as *procedural* text, differs from the explanatory and narrative text on which most reading programs are based. In addition, unlike reading and content-area texts, which are usually organized to make the reading easy to understand, workplace communication is not necessarily designed to be easy to read. It may even be poorly or unclearly written. These differences can affect the skills employees need when they encounter job-related reading tasks. Reading for Information skills included can be loosely grouped into the following four categories:

**Choosing Main Ideas or Details**

This skill requires selecting the important information and supporting details from a written document. Looking for main ideas and details is a common reading task. But, as mentioned previously, reading texts encountered in the workplace differ from the selections most often used in reading programs. In such programs, the main idea is generally found in the topic sentence at the beginning of a paragraph or occasionally in a concluding sentence. However, written communication found in the workplace is often not constructed in such an organized manner. Consequently, the employee needs to be able to use clues other than placement to identify the main ideas and important details.

**Understanding Word Meanings**

Although some basic vocabulary is involved in this skill area, the emphasis is on using context to determine specific word meanings. The demands of the workplace progress from the need to know simple words and identify definitions clearly stated in the reading to the need to use the context to determine the meanings of more difficult words. Jargon, technical terminology, and words with multiple meanings are used increasingly as the contexts become more complex.

**Applying Instructions**

Conveying instructions is the principal purpose of a great deal of workplace communication. Skill in applying instructions involves sequencing and generalizing. As in the other skill areas, the workplace requirements range from the simple to the more complex. As the levels increase, the instructions contain more steps and conditionals are added. At the lower levels, employees need only apply instructions to clearly described situations; at the higher levels, employees must apply instructions to less similar and, eventually, to new situations.

**Applying Information and Reasoning**

Often, for effective performance of a task, it is necessary for employees to apply information given in workplace communications to similar or new situations, to predict consequences of certain actions, and to understand the reasoning, which may or may not be stated, behind a policy. As in the previous category, employees may be asked to apply information and reasoning to clearly described situations at the lower levels, while, at higher levels, they must apply information and reasoning to similar and then to new situations.
## Reading for Information Characteristics

The chart below describes the five levels of the Reading for Information skill. Both the nature of the documents and the tasks using the documents change at each level.

<table>
<thead>
<tr>
<th>Level</th>
<th>Characteristics of Reading Materials and Questions</th>
<th>45 Minutes, 33 Problems</th>
<th>Skills</th>
</tr>
</thead>
</table>
| 3     | • Short, uncomplicated passages which use elementary vocabulary  
       • Basic company policies, procedures, and announcements  
       • All necessary information stated clearly in the reading materials  
       • Wording of the questions and answers similar or identical to the wording used in the reading materials | • Pick out the main ideas and clearly stated details  
       • Choose the correct meaning of a word that is clearly defined in the reading  
       • Choose the correct meaning of common everyday and workplace words  
       • Choose when to perform a step in a series of steps  
       • Apply instructions to a situation that is the same as the one in the reading materials |        |
| 4     | • Straightforward but longer sentences than at Level 3  
       • More detail and greater number of steps in described procedures  
       • Described policies and procedures include changing conditions that affect the best action  
       • Common words but some harder words also  
       • Questions and answers paraphrased from the passage | • Identify important details that may not be clearly stated  
       • Use the reading material to figure out the meaning of words that are not defined  
       • Apply instructions with several steps to a situation that is the same as the situation in the reading materials  
       • Choose what to do when changing conditions call for a different action |        |
| 5     | • More details, greater complexity, and broader topics than those at Level 4  
       • Specialized words and phrases (e.g., jargon and technical terms), and some words with multiple meanings  
       • Application of information given in the passage to a situation that is not specifically described in the passage  
       • Several considerations to be taken into account in order to choose the correct responses | • Figure out the correct meaning of a word based on how the word is used  
       • Identify the correct meaning of an acronym that is defined in the document  
       • Identify the paraphrased definition of a technical term or jargon that is defined in the document  
       • Apply technical terms and jargon and relate them to stated situations  
       • Apply straightforward instructions to a new situation that is similar to the one described in the material  
       • Apply complex instructions that include conditionals to situations described in the materials |        |
<table>
<thead>
<tr>
<th>Level</th>
<th>Characteristics of Reading Materials and Questions</th>
<th>Skills</th>
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<tbody>
<tr>
<td>6</td>
<td>• More complex presentation of information</td>
<td>• Identify implied details</td>
</tr>
<tr>
<td></td>
<td>• Excerpts from regulatory and legal documents</td>
<td>• Use technical terms and jargon in new situations</td>
</tr>
<tr>
<td></td>
<td>• More elaborate procedures and concepts described</td>
<td>• Figure out the less common meaning of a word based on the context</td>
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<tr>
<td></td>
<td>• Advanced vocabulary, jargon, and technical terms</td>
<td>• Apply complicated instructions to new situations</td>
</tr>
<tr>
<td></td>
<td>• Most necessary information not clearly stated in the passages</td>
<td>• Figure out the principles behind policies, rules, and procedures</td>
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<tr>
<td></td>
<td></td>
<td>• Apply general principles from the materials to similar and new situations</td>
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<tr>
<td></td>
<td></td>
<td>• Explain the rationale behind a procedure, policy, or communication</td>
</tr>
<tr>
<td>7</td>
<td>• More difficult passages</td>
<td>• Figure out the definitions of difficult, uncommon words based on how they are used</td>
</tr>
<tr>
<td></td>
<td>• Denser information</td>
<td>• Figure out the meaning of jargon or technical terms based on how they are used</td>
</tr>
<tr>
<td></td>
<td>• Complex concepts</td>
<td>• Figure out the general principles behind the policies and apply them to situations that are quite different from any described in the materials</td>
</tr>
<tr>
<td></td>
<td>• Difficult vocabulary</td>
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<tr>
<td></td>
<td>• Jargon and technical terms whose definitions must be derived from context</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lacks clarity and direction</td>
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This practice set gives examples of the reading materials and questions on the WorkKeys Reading for Information assessment. It can help you understand the WorkKeys skill levels and give you practice for the actual WorkKeys assessment. However, remember that this practice set is not a full-length test and your score is not a substitute for the actual WorkKeys test score. The actual test consists of 33 questions and has a time limit of 45 minutes. Several questions may be grouped together and relate to a single piece of reading material.

WorkKeys Reading for Information is the skill people use when they read and use written text in order to do a job. The written texts include memos, letters, directions, signs, notices, bulletins, policies, and regulations. It is often the case that workplace communications are not necessarily well-written or targeted to the appropriate audience. Reading for Information materials do not include information that is presented graphically, such as in charts, forms, or blueprints. There are five skill levels, from Level 3 to Level 7. As you move from Level 3 to Level 7, both the materials and the tasks become more complex.
Individuals with Level 3 skills understand basic words and can identify main ideas. They understand how and when to follow each step in a set of instructions and can use the instructions in situations that are the same as the one they are reading about. Level 3 materials include simple instructions, company policies, and announcements. They are short and straightforward, and contain basic vocabulary.

OMNIS, INC.

Dear Staff:

Thank you for all of your get-well wishes since my recent heart attack. The heart attack caught me by surprise. But the doctor says I’ll be as good as new if I take it easy for a while. I am taking a temporary leave of absence from the company. My wife and I are going to Arizona where she will force me to take care of myself for the next two months.

Our vice president, Lati Daniels, will be in charge while I am gone. You will be in good hands. When I come back fully recovered, we’ll have a company party.

Don Johnson
President

1. You are a staff member reading the letter from the company president. The company president’s main purpose in writing this letter is to:
   
   A. announce that he is resigning from his job.
   B. inform employees of his temporary leave of absence.
   C. praise the company’s vice president.
   D. set the date for a company party.
   E. tell his staff that he is retiring to Arizona.
City Hall Evacuation Procedure

As the floor monitor for your area, you are responsible for ensuring that all persons in your area are accounted for. When the alarm goes off, first check each employee's space to make sure they leave the building. Then check conference rooms and restrooms for visitors. Note the name of anyone who does not leave. Go out the main door of the building. If you are not on the ground floor, tell everyone to take the stairs to the ground floor and go out the main door. DO NOT USE ELEVATORS. If anyone needs help, call x4144 and the fire department will come.

All employees should gather at the northeast corner of the parking lot across Orange Avenue so that everyone will be accounted for. Wait until the fire department gives the all-clear signal before re-entering the building.

2. You are the floor monitor for your area. According to the procedure shown, the reason all employees should gather at the northeast corner of the parking lot is so that:

A. employees can leave the area in their cars.
B. the fire department can get in.
C. they can re-enter the building easily.
D. they can hear the all-clear signal.
E. you can account for everyone.

3. You are the floor monitor for your area. According to the procedure shown, when you hear the alarm, the first thing you should do is:

A. call x4144 to get help.
B. check each employee’s space.
C. check the conference rooms for visitors.
D. exit the building through the main door.
E. take the stairs to the ground floor.
Reading for Information Level 4

Individuals with Level 4 skills can apply instructions to situations that are the same as the situations in the reading materials. They can identify cause-effect relationships and understand words that are not defined for them, based on the context. Level 4 materials may include several details or describe processes involving several steps.

An Ounce of Prevention

To make Gracie Industries more secure and prevent future virus outbreaks, IT will install the capability for your computer to upgrade critical patches automatically.

Phase 1 updates the system setting on your PC. If you have a message showing that changes have been made to your system, you should restart your PC.

Phase 2 downloads and installs critical patches to your system.

- If your PC does not have the most current patches, you will see a flashing icon in the lower right corner of your screen. Click that icon. Then click on the Install Now button. When it’s finished, restart your PC.
- If your PC has the most current patches, you will not be asked to install or reboot your PC.

If you get an error message during either of these two phases, send an e-mail to technical support informing them what the error message is and when it occurred in this process.

After the patches have been applied, if you keep getting a pop-up window saying that your PC will automatically reboot, send an e-mail to technical support.

1. You work at Gracie Industries. According to the notice shown, if your PC continues to show a message saying it will reboot automatically, you should:

A. check that your patches are up to date.
B. click the Install Now button.
C. restart your PC.
D. send a message to technical support.
E. update the system setting.
2. You are a teacher at Elm Street Elementary School. According to the memo shown, after April 2, where should you dismiss your students?

A. At a personally designated area on campus
B. At the gate adjacent to room #1
C. At the gate on Elm Street
D. By the yellow curb next to the cafeteria
E. Through the gate closest to the Kindergarten classrooms

3. You are an Elm Street Elementary teacher on bus duty after school. A parent drives up and wants to know where to park so he can attend a short parent-teacher conference at the school. According to the memo shown, you should tell the parent he may park:

A. along the side of the driveway.
B. in a space in front of the school.
C. in an unoccupied staff parking space.
D. in the parking lot at the side of the school.
E. in the parking lot behind the cafeteria.
Individuals with Level 5 skills can apply information from reading materials to new situations that are similar to those described in the materials and they can understand words and phrases with specialized or multiple meanings. Level 5 materials include company policies, procedures, and announcements. All the information in them is stated clearly and directly, but there are many details.

Many of the duties of a customer service representative at P. S. Utility Co. involve keeping records, either by filling out forms or by recording actions and conversations. For most records, there are state regulations that you should be sure to follow. However, some required records, like handwritten notes, are not covered by state regulations.

Keep handwritten notes as a record of every customer phone call that you receive. When taking notes, always include the caller's name, the date and the time of day you received the call, and the customer number. When you are on the phone, encourage the customer to be direct about the nature of the concern or complaint. When taking notes, write down the customer's exact words, or as close as possible to the exact words. Review your notes with the customer before ending the conversation, repeating the major points in order to confirm that your notes are accurate. Be sure to ask the customer directly, "Is that correct?" Be polite to the customer at all times, even if the customer is rude to you. Remember, the customer may be upset about the situation. Listening carefully and speaking politely can help calm down an irate customer.

After the call, mark your calendar to remind you when to follow up with any necessary action. Also, put your notes away in the proper location. Proper record storage is just as important as keeping clear, complete, and accurate records. Always follow our standard filing procedures and file by customer number in the central files. Remember, others must also be able to locate material in the files.
1. You are a customer service representative. According to the policy shown, you should read your notes back to the customer in order to:

A. behave politely to the customer.
B. calm the customer down.
C. encourage the customer to describe the problem clearly.
D. make sure your notes are reliable.
E. show the customer you listened carefully.
To: Builders, Contractors, Realtors, New Home Buyers

From: City Administration

The City Building Inspectors are frequently put into a position of deciding whether to allow a new home to be occupied before construction has been completed. The City is willing to work with the contractors and builders when special circumstances warrant. However, be informed that the inspector’s job is to ensure that the standards established by the building codes for all structures and the surrounding site are met.

Temporary or final occupancy permits will not be granted if the inspector finds any life/safety problems in the home. In this situation, a buyer cannot move into the home under any circumstance. All critical items must be completed and a reinspection must occur prior to occupation of the home.

If the inspector concludes that there are no life/safety issues but the home and/or site have minor items to be completed, a temporary occupancy permit may be granted. Circumstances allowing the inspector to grant a temporary permit are usually weather related. Temporary means occupation of the home while the listed items are being corrected. There will be a specific deadline to complete all construction. If the items are not completed in the specified time, the inspector has the authority to terminate water service to the home and to have the owner evicted. Additionally, the construction bond will not be returned until all work is finished. If the inspector feels that the typical bond is insufficient to cover the costs of the required work, additional bond must be posted with the City prior to occupancy.
2. The main purpose of the inspection policy shown is to:
   A. allow owners to move into their new homes early under special circumstances.
   B. encourage city inspectors and builders to work together.
   C. ensure that a new home is safe before the buyers move in.
   D. establish eviction procedures to follow when building requirements are not met.
   E. explain the legal issues regarding the use of occupancy permits.

3. As used in the last sentence of the policy shown, bond refers to:
   A. a certificate providing a loan in return for interest.
   B. a policy covering losses arising from the acts of a builder.
   C. a sum of money paid as a guarantee of certain action.
   D. an adhesive used to join two surfaces.
   E. durable paper used in preparing legal documents.
Reading for Information Level 6

Individuals with Level 6 skills can read and understand complex documents and generalize from the materials to new situations. They can correctly apply complex instructions from these materials and understand the rationale behind policies and procedures described in the materials. Level 6 materials may include complex regulatory and legal documents, and rental agreements.

Memorandum

TO: Team Members, Regency Line
FROM: Vice President of Marketing, SunRay Corporation
RE: Regency Line Objectives and Priorities

This memorandum is in response to our discussion on January 30. Its intent is not to dictate, but to reflect my understanding of the team’s current objectives and priorities and to share my opinion that my expectations for first year sales from our newly acquired Regency Line have been largely unrealized.

We should treat this, our first year, as a startup enterprise. Given finite startup resources, our primary concentration this year must be on achieving breakeven performance. For the next fiscal year and to the extent available resources permit, we should attend to the potential for sustained profitable performance and future growth in the Regency Line, but not at serious detriment to seeking earliest breakeven.

I believe your analysis contains many of the elements for success. You have identified a potentially powerful organizing theme, and I didn’t see anything in your analysis that could not fit comfortably under such a banner. However, when I review next year’s sales projections, I have difficulty envisioning a simple mapping of your theme. There are certainly some gaps in the product line that perhaps could be filled by reconstructing product literature and adding a few new products. This would spearhead a really dynamite marketing campaign. In sum, I think you have the makings of a really good idea here, but are still looking at it too much from a “business as usual” framework.

I do not know enough about the trade shows you propose to attend to think of micro-managing your decisions. My general experience has been that attendance is fun, informative, and a good way of gaining and maintaining contacts, some of whom may be useful some day, but not a great way to make quick sales. Given these considerations, I’ll back whatever decision you make concerning attendance at trade shows.
1. Based on the memo shown, the vice president of marketing is NOT:
   A. being receptive to new ideas.
   B. expressing his opinions.
   C. listening to his employees.
   D. showing satisfaction with Regency Line sales.
   E. working with the team members toward solutions.

2. Based on the memo shown, the vice president of marketing believes that trade shows are:
   A. a means to gain useful contacts.
   B. a waste of time.
   C. important to boost sales immediately.
   D. not to be included in the marketing plan.
   E. opportunities for employment.

3. Based on the memo shown, what does the vice president think is a weakness of the proposed Regency Line marketing campaign?
   A. Improvements to the product literature would be too costly.
   B. The direction that the campaign will take is unclear.
   C. The marketing analysis is not consistent with the theme.
   D. The marketing theme is weak and limited.
   E. The product line needs to be reduced.
Reading for Information Level 7

Individuals with Level 7 skills can figure out the underlying principles in complex documents and apply them to situations that are quite different from any described in the materials. They can understand unfamiliar terms from the context. Level 7 materials are densely detailed passages, such as excerpts from complex regulatory and legal documents. They contain complicated concepts and procedures. The language includes jargon and technical terms.

COMPLETION AND SUBMISSION OF THE PT&E REPORT

Each salesperson must maintain meticulously accurate records of production, time, and expenses. To assist you, we are providing the following information regarding the completion of the PT&E Report form, from which your reimbursement and base earnings will be derived, and which will constitute one of the supporting documents utilized in determining your monthly remuneration and your annual bonus.

1. Reporting Production
   You will be required to maintain diurnal records of sales transactions (any less frequently generally leads to errors in recording) so that this section of the PT&E Report form, which is to be submitted at the end of each week, may be completed accurately. Thus, each day you work, you are required to make columnar entries, which will facilitate adding up and down and across the columns, of the total number of completed major activities and tasks (i.e., face-to-face presentations, telephone introductions, qualifying prospects, demos, closes, and the like).

2. Reporting Time
   The PT&E Report requires you to record each day (making columnar entries) time spent that day in specific activities, such as the tasks, listed above, on which you are asked to record daily production, and work such as setting appointments; assembling prototypes for presentation; cold calls; and proffering quotations.

   For each day you work, record the total number of hours worked, expressed in hours and portions of an hour, to the nearest quarter hour.

3. Reporting Expenses
   Provision is made on the Report form for recording miles driven and for other reimbursable expenses. In order to calculate actual miles driven on company business, commit your odometer readings to a log when you depart from home and when you return. Mileage numbers, tolls, postage, and all other allowable expenses are to be consolidated and recorded only once a week as a single total expenditure in the small red box in the lower right corner of the Report.

4. Allowable expenses
   To be allowable for reimbursement, expenditures must fall within company guidelines, which, concerning this policy, have been established by the five district managers. It is essential that you have an unambiguous comprehension of allowable charges. Some of the more common ones are specified below.

   A. Mileage at the current company rate for each mile driven on company business

   B. Parking fees, if free parking is not available in the general area you are visiting on company business

   C. Road tolls and telephone calls made in the line of business

   D. Lodging and meals when overnight stays away from your home are necessary
1. Based on the instructions shown, what are you NOT required to record in a columnar entry?
   A. Contacts with clients
   B. Hotel/motel bills
   C. Hours spent on cold calls
   D. Sales presentations
   E. Time spent giving quotes

2. According to the instructions shown, how should any permissible expenses be recorded on the PT&E Report?
   A. Added together as one figure placed at the bottom of the report
   B. Grouped under the appropriate allowable charges
   C. Grouped under the headings of “Mileage” and “All Other Expenses”
   D. Listed in order of occurrence and totaled on a separate page
   E. Listed separately in columnar entries under “Reporting Expenses”

3. According to the instructions shown, the PT&E Report is NOT meant to be used as a:
   A. basis for periodic employee evaluation.
   B. daily organizer to plan sales activities.
   C. diary of total amount of time spent working.
   D. personal record of production, time, and expenses.
   E. tool to standardize sales staff recordkeeping.
An Important Consideration about the Answers to the Practice Sets

Some WorkKeys questions have a response choice (the “key”) that can be clearly defined as right or correct and other response choices (the “distractors” or “foils”) that can be identified as wrong or incorrect. Many WorkKeys questions, however, are in a best-response format: the keyed response is simply the best of those available. It is important to keep this in mind when discussing such questions, since it will sometimes be possible to think of responses that would be better than any of those offered, or to defend a distractor as not entirely wrong. Best-response formats are consistent with the real world, where choices among less-than-perfect alternatives are routinely the case.

Answers to Reading for Information Level 3 Practice Set

Answer to Level 3 Sample Item 1

A. Incorrect. announce that he is resigning from his job. The president writes that he will place the vice president in control of the company, but only temporarily. He states that he will come back when he is fully recovered.

B. Correct. inform employees of his temporary leave of absence. The letter is comprised almost entirely of information about the president’s temporary absence from the company, including why he will be away, who will be in charge during his absence, and what will happen upon his return to work.

C. Incorrect. praise the company’s vice president. In the letter, the president mentions the vice president and implies her competence, but says specifically that she will be in charge while he is recuperating.

D. Incorrect. set the date for a company party. The president states, “When I come back fully recovered, we’ll have a company party.” However, he does not set a date.

E. Incorrect. tell his staff that he is retiring to Arizona. The president states in the letter that he and his wife “are going to Arizona where she will force me to take care of myself for the next two months.” He does not say that he will be retiring in Arizona.

Answer to Level 3 Sample Item 2

A. Incorrect. employees can leave the area in their cars. The procedure states, “All employees should gather at the northeast corner of the parking lot…so that everyone will be accounted for.” There is no mention of employees leaving in their cars, even though they are in the parking lot.

B. Incorrect. the fire department can get in. The procedure states that the fire department will come for anyone who needs assistance leaving the building and will give the all-clear signal. There is no mention of how the fire department will enter. The reason for gathering in the northeast corner of the parking lot is so that you can account for everyone.

C. Incorrect. they can re-enter the building easily. There is no reference to whether they should be able to re-enter easily. The reason for gathering in the northeast corner of the parking lot is so that you can account for everyone.

D. Incorrect. they can hear the all-clear signal. While it might be possible to hear the signal from the parking lot, the reason for gathering in the northeast corner of the parking lot is so that you can account for everyone

E. Correct. you can account for everyone. The procedure states, “All employees should gather at the northeast corner of the parking lot…so that everyone will be accounted for.”

Answer to Level 3 Sample Item 3

A. Incorrect. call x4144 to get help. The procedure states, “When the alarm goes off, first check each employee’s space to make sure they leave the building.” You should call x4144 if the fire department needs to help someone get out of the building.

B. Correct. check each employee’s space. The procedure states, “When the alarm goes off, first check each employee’s space to make sure they leave the building.”

C. Incorrect. check the conference rooms for visitors. You should check the conference rooms for visitors after you check each employee’s space.

D. Incorrect. exit the building through the main door. The procedure states, “When the alarm goes off, first check each employee’s space to make sure they leave the building.” You should exit the building after checking each employee’s space.

E. Incorrect. take the stairs to the ground floor. The procedure states, “When the alarm goes off, first check each employee’s space to make sure they leave the building.” You should tell everyone to take the stairs just before you leave the building.
Answers to Reading for Information Level 4 Practice Set

Answer to Level 4 Sample Item 1

A. Incorrect. **check that your patches are up to date.** According to the notice shown, “if you keep getting a pop-up window saying that your PC will automatically reboot,” it is a sign that something is wrong and you should send an e-mail to technical support. If you already have the most current patches, you will not get a pop-up window asking you to reboot.

B. Incorrect. **click the Install Now button.** According to the notice shown, “if you keep getting a pop-up window saying that your PC will automatically reboot,” it is a sign that something is wrong and you should send an e-mail to technical support. You will not have an Install Now button.

C. Incorrect. **restart your PC.** According to the notice shown, “if you keep getting a pop-up window saying that your PC will automatically reboot,” it is a sign that something is wrong and you should send an e-mail to technical support.

D. Correct. **send a message to technical support.** According to the notice shown, “if you keep getting a pop-up window saying that your PC will automatically reboot,” it is a sign that something is wrong and you should send an e-mail to technical support.

E. Incorrect. **update the system setting.** According to the notice shown, “if you keep getting a pop-up window saying that your PC will automatically reboot,” it is a sign that something is wrong and you should send an e-mail to technical support. This error would occur after you update your system.

Answer to Level 4 Sample Item 2

A. Incorrect. **At a personally designated area on campus.** The memo mentions that parents and caregivers may meet students at a designated area on campus and it might be incorrectly concluded that the students would be dismissed at the same place.

B. Correct. **At the gate adjacent to room #1.** The memo states “Any students arriving after this time must use the gate adjacent to room #1. This will also be the gate where the students will be dismissed.”

C. Incorrect. **At the gate on Elm Street.** This location is in the first sentence of the memo, but the memo states that “the gate closest to the Kindergarten classrooms on Elm Street will be locked at 8:30 A.M.”

D. Incorrect. **By the yellow curb next to the cafeteria.** This is an attractive choice because it is mentioned as a student drop off and pick up for the parents. The pick up spot could be confused with dismissal, but the memo states, “The yellow curb is for drop off and pick up only.”

E. Incorrect. **Through the gate closest to the Kindergarten classrooms.** This location is mentioned in the first paragraph, but the memo actually states that “the gate closest to the Kindergarten classrooms on Elm Street will be locked at 8:30 A.M.”

Answer to Level 4 Sample Item 3

A. Incorrect. **along the side of the driveway.** This might appear logical for parking, because the parent will be at the school for a short time, but the memo states, “Cars should not be left unattended in the driveway at any time, for any reason.” The parent should park in a space in front of the school.

B. Correct. **in a space in front of the school.** The memo states, “Spaces in front of the building are designated for visitor parking.” The parent should park in a space in front of the school.

C. Incorrect. **in an unoccupied staff parking space.** It might appear logical to park here, because it is unoccupied and the parent will be at the school for a short time, but the memo states, “Parents may not park in staff designated parking spots.” The parent should park in a space in front of the school.

D. Incorrect. **in the parking lot at the side of the school.** This parking area is mentioned in the memo, but it is for staff only. The parent should park in a space in front of the school.

E. Incorrect. **in the parking lot behind the cafeteria.** This parking area is mentioned in the memo, but the memo states that it is for staff only. The parent should park in a space in front of the school.
Answers to Reading for Information Level 5 Practice Set

Answer to Level 5 Sample Item 1

A. Incorrect. *behave politely to the customer.* You are to act politely, but that is not the stated purpose of repeating your notes. The policy states, “Review your notes with the customer before ending the conversation, repeating the major points in order to confirm that your notes are accurate.”

B. Incorrect. *calm the customer down.* Acting politely can calm the customer down, but that is not the stated purpose of repeating your notes. The policy states, “Review your notes with the customer before ending the conversation, repeating the major points in order to confirm that your notes are accurate.”

C. Incorrect. *encourage the customer to describe the problem clearly.* You are to encourage the customer to describe the problem clearly, but that is not the stated purpose of repeating your notes. The policy states, “Review your notes with the customer before ending the conversation, repeating the major points in order to confirm that your notes are accurate.”

D. Correct. *make sure your notes are reliable.* The policy states, “Review your notes with the customer before ending the conversation, repeating the major points in order to confirm that your notes are accurate.”

E. Incorrect. *show the customer you listened carefully.* Listening carefully can calm the customer down, but that is not the stated purpose of repeating your notes. The policy states, “Review your notes with the customer before ending the conversation, repeating the major points in order to confirm that your notes are accurate.”

Answer to Level 5 Sample Item 2

A. Incorrect. *allow owners to move into their new homes early under special circumstances.* The first paragraph suggests that the city is willing to allow early move-in; however, the second paragraph cautions that special permits will not *be issued if any life/safety issues are unresolved.*

B. Incorrect. *encourage city inspectors and builders to work together.* Although this is also mentioned in the first paragraph, the first two paragraphs make it clear that safety is the overriding issue.

C. Correct. *ensure that a new home is safe before the buyers move in.* The first paragraph states, “However, be informed that the inspector’s job is to ensure that the standards established by the building codes for all structures and the surrounding site are met.” The next paragraph cautions that special permits “will not be granted if the inspector finds any life/safety problems in the home.”

D. Incorrect. *establish eviction procedures to follow when building requirements are not met.* The inspector’s power to evict owners is mentioned in the third paragraph only as a caution regarding the importance of safety.

E. Incorrect. *explain the legal issues regarding the use of occupancy permits.* Although occupancy permits are mentioned, the memo does not discuss any legal issues regarding their use.
Answer to Level 5 Sample Item 3

A. Incorrect. *a certificate providing a loan in return for interest.* Although the memo discusses a bond being posted or given and returned, it is not a loan nor is anything borrowed. As used in this memo, “bond” refers to a sum of money paid as a guarantee that the City will not have to pay the cost of completing work that is supposed to be completed by the builder. You can infer this meaning from the statement that “additional bond must be posted” if the original amount is not high enough.

B. Incorrect. *a policy covering losses arising from the acts of a builder.* Although the memo mentions covering costs, nothing describes covering losses. As used in this memo, “bond” refers to a sum of money paid as a guarantee that the City will not have to pay the cost of completing work that is supposed to be completed by the builder. You can infer this meaning from the statement that “additional bond must be posted” if the original amount is not high enough.

C. Correct. *a sum of money paid as a guarantee of certain action.* If the work is not completed, the bond money can be used to hire someone else to finish the job. This meaning is implied when the text states, “If the inspector feels that the typical $500 bond is insufficient to cover the costs...additional bond must be posted with the City prior to occupancy.”

D. Incorrect. *an adhesive used to join two surfaces.* This meaning could seem logical because the topic of the memo is construction; however, as used in this memo, “bond” refers to a sum of money paid as a guarantee that the City will not have to pay the cost of completing work that is supposed to be completed by the builder. You can infer this meaning from the statement that “additional bond must be posted” if the original amount is not high enough.

E. Incorrect. *durable paper used in preparing legal documents.* Although durable “bond paper” can be used in preparing legal documents, this is not what the term “bond” refers to in the memo. As used in this memo, “bond” refers to a sum of money paid as a guarantee that the City will not have to pay the cost of completing work that is supposed to be completed by the builder. You can infer this meaning from the statement that “additional bond must be posted” if the original amount is not high enough.
Answers to Reading for Information Level 6 Practice Set

Answer to Level 6 Sample Item 1

A. Incorrect. **Being receptive to new ideas.** In the third paragraph, the vice president states, “In sum, I think you have the makings of a really good idea here, but are still looking at it too much from a ‘business as usual’ framework.” This shows that the vice president welcomes new ideas.

B. Incorrect. **Expressing his opinions.** In the first paragraph the vice president states, “…and to share my opinion that my expectations for first year sales from our newly acquired Regency Line have been largely unrealized.”

C. Incorrect. **Listening to his employees.** In the first paragraph the vice president states, “This memorandum is in response to our discussion on January 30. Its intent is not to dictate, but to reflect my understanding of the team’s current objectives and priorities…” He is responding to what his employees have said earlier.

D. Correct. **Showing satisfaction with Regency Line sales.** In the last sentence of the first paragraph, the vice president implies this when he states “…my expectations for first year sales from our newly acquired Regency Line have been largely unrealized.”

E. Incorrect. **Working with the team members toward solutions.** The vice president has made useful suggestions in the third paragraph such as, “There are certainly some gaps in the product line that perhaps could be filled by reconstructing product literature and adding a few new products. This would spearhead a really dynamite marketing campaign.”

Answer to Level 6 Sample Item 2

A. Correct. **A means to gain useful contacts.** The vice president states in the fourth paragraph, “My general experience has been that attendance is fun, informative, and a good way of gaining and maintaining contacts, some of whom may be useful some day, but not a great way to make quick sales.”

B. Incorrect. **A waste of time.** Although the vice president states that trade shows are “not a great way to make quick sales,” he does acknowledge the value of attending trade shows, because they are “a good way of gaining and maintaining contacts, some of whom may be useful some day.”

C. Incorrect. **Important to boost sales immediately.** The vice president says that trade shows are “a good way of gaining and maintaining contacts, … but not a great way to make quick sales.”

D. Incorrect. **Not to be included in the marketing plan.** The vice president states in the last sentence of paragraph four that the decision to include trade shows in the marketing plan is up to the team members. He states, “I do not know enough about the trade shows you propose to attend to think of micro-managing your decisions.”

E. Incorrect. **Opportunities for employment.** Although there are many vendors at trade shows, and therefore possible opportunities for new employment, the vice president does not state this nor would he logically desire to lose employees to other businesses.

Answer to Level 6 Sample Item 3

A. Incorrect. **Improvements to the product literature would be too costly.** There is no discussion about costs being too high for product literature. In paragraph three, the vice president states, “There are certainly some gaps in the product line that perhaps could be filled by reconstructing product literature and adding a few new products.” His statement indicates that improvements to the product literature are very possible.

B. Correct. **The direction that the campaign will take is unclear.** Although the vice president praises the marketing analysis, the memo states, “However, when I review next year’s sales projections, I have difficulty envisioning a simple mapping of your theme.”

C. Incorrect. **The marketing analysis is not consistent with the theme.** Although the vice president has “difficulty envisioning a simple mapping of your theme,” the third paragraph states that analysis does fit under the theme.

D. Incorrect. **The marketing theme is weak and limited.** The marketing theme is described in paragraph three: “You have identified a potentially powerful organizing theme, and I didn’t see anything in your analysis that could not fit comfortably under such a banner.”

E. Incorrect. **The product line needs to be reduced.** The product line is mentioned in the memo; however, the memo states, “There are certainly some gaps in the product line that perhaps could be filled by reconstructing product literature and adding a few new products. This would spearhead a really dynamite marketing campaign.” This statement indicates that the vice president thinks the product line may need to be expanded.
Answers to Reading for Information Level 7 Practice Set

Answer to Level 7 Sample Item 1

A. Incorrect. **Contacts with clients.** Client contacts include telephone introductions, qualifying prospects, and setting appointments, which are listed under “Reporting Production” and “Reporting Time.”

B. Correct. **Hotel/motel bills.** Hotel/motel bills are not production entries, nor do they take your time. They are expenses, and expenses do not require columnar entries. While the exact phrase “hotel/motel bills” was not stated as an expense in the instructions, lodging for overnight stays is cited as an “allowable expense.”

C. Incorrect. **Hours spent on cold calls.** Time entries are to be recorded in columns, and cold calling is a time entry, specifically mentioned in the instructions under Reporting Time. While mileage (associated with cold calls) is an expense, travel is a function that is separate from the activity of making cold calls.

D. Incorrect. **Sales presentations.** Both production and time entries must be recorded in columns, and sales presentations even though not directly mentioned, would be recorded in both areas.

E. Incorrect. **Time spent giving quotes.** Time spent giving quotes would fall under time entries, which must be entered into columns.

Answer to Level 7 Sample Item 2

A. Correct. **Added together as one figure placed at the bottom of the report.** In the Reporting Expenses section, the instructions state that once a week, all allowable expenses should be consolidated and recorded as a single total expenditure in the small red box in the lower right corner of the report.

B. Incorrect. **Grouped under the appropriate allowable charges.** Even though some common groupings are listed under the Allowable Expenses section of the instructions shown, these do not need to be grouped and recorded in such a manner on the PT&E Report.

C. Incorrect. **Grouped under the headings of “Mileage” and “All Other Expenses.”** All allowable expenses are to be consolidated and recorded as a single total expenditure on the report. Mileage expenses should be consolidated with all other allowable expenses according to the instructions in the Reporting Expenses section.

D. Incorrect. **Listed in order of occurrence and totaled on a separate page.** All allowable expenses are to be consolidated and recorded as a single total expenditure on the report. Although listing expenses in order of occurrence and totaling them on a separate page seems logical, it is not mentioned in the instructions.

E. Incorrect. **Listed separately in columnar entries under “Reporting Expenses.”** All allowable expenses are to be consolidated and recorded as a single total expenditure on the report. Production and time are to be listed in columnar entries, but there is no mention of doing this for reporting expenses.

Answer to Level 7 Sample Item 3

A. Incorrect. **basis for periodic employee evaluation.** The PT&E Report is meant to be used for periodic employee evaluation. The instructions state that it “will constitute one of the supporting documents utilized in determining your monthly remuneration and your annual bonus.”

B. Correct. **Daily organizer to plan sales activities.** The PT&E Report is meant to be used as a daily record of sales activities, not as a daily organizer to plan sales activities. In other words, it is to be filled out at the end of the workday with tasks accomplished; not at the beginning with tasks to be accomplished.

C. Incorrect. **Diary of total amount of time spent working.** The PT&E Report is meant to be used as a diary, or daily record, of total amount of time spent working. The instructions specifically state that the total number of hours worked should be recorded for each day you work.

D. Incorrect. **Personal record of production, time, and expenses.** The PT&E Report is meant to be used as a personal record of production, time, and expenses. This summarizes the key points of the instructions.

E. Incorrect. **Tool to standardize sales staff recordkeeping.** The PT&E Report is meant to be used as a tool to standardize sales staff recordkeeping, since specific information is provided in the instructions on how sales staff should fill it out.